

## IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

Claims 1-10 (Cancelled).

Claim 11. (Currently amended) A method for manufacturing a buffer layer of a light emitting semiconductor device, comprising the steps of:

providing a substrate;

~~forming a metal layer on said substrate by supplying an organic metal gas; and~~

~~forming a metallic nitride layer by supplying a nitride gas to react with part of said metal layer~~ layers formerly formed by the organic metal gas,

thereby the buffer layer is composed of at least one material selected from the group consisting of metals and compound semiconductors.

Claim 12. (Original) The method as claimed in claim 11, wherein said substrate is made of material selected from the group of sapphire, SiC, silicon, GaAs, InP, AlN, GaP, GaN, and ZnSe.

Claims 13-20 (Cancelled)

Claim 21. (New) The method as claimed in claim 11, wherein the metals are selected from the group consisting of Ga, Al, B, As and In.

Claim 22. (New) The method as claimed in claim 11, wherein the metals are alloys selected from the group consisting of Ga, Al, B, As and In.

Claim 23. (New) The method as claimed in claim 11, wherein the compound semiconductors are selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlInN, InGa<sub>N</sub>, AlBN, InBN, InAsN, AlAsN, GaAsN, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAsN, AlGaAsN, AlInGaBN, AlInGaAsN and AlInGaAsBN.

Claim 24. (New) The method as claimed in claim 11, wherein the method is adapted to a CVD system.

Claim 25. (New) A method for manufacturing a buffer layer of a light emitting semiconductor device, comprising the steps of:

providing a substrate;

supplying an organic metal gas;

supplying a nitride gas to react with layers formerly formed by the organic metal gas; and

repeating the steps of supplying the organic metal gas and supplying the nitride gas in sequence so as to form the buffer layer composed of at least one selected from the group consisting of the layer and a metallic nitride layer.

Claim 26. (New) The method as claimed in claim 25, wherein said substrate is made of material selected from the group of sapphire, SiC, silicon, GaAs, InP, AlN, GaP, GaN, and ZnSe.

Claim 27. (New) The method as claimed in claim 25, wherein said layer is selected from the group consisting of indium (In) and alloy thereof.

Claim 28. (New) The method as claimed in claim 27, wherein said metallic nitride layer is selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlIn<sub>N</sub>, InGa<sub>N</sub>, AlBN, InBN, InAs<sub>N</sub>, AlAs<sub>N</sub>, GaAs<sub>N</sub>, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAs<sub>N</sub>, AlGaAs<sub>N</sub>, AlInGaBN, AlInGaAs<sub>N</sub> and AlInGaAsBN.

Claim 29. (New) The method as claimed in claim 25, wherein said layer is selected from the group consisting of aluminum (Al) and alloy thereof.

Claim 30. (New) The method as claimed in claim 29, wherein said metallic nitride layer is selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlIn<sub>N</sub>, InGa<sub>N</sub>, AlBN, InBN, InAs<sub>N</sub>, AlAs<sub>N</sub>, GaAs<sub>N</sub>, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAs<sub>N</sub>, AlGaAs<sub>N</sub>, AlInGaBN, AlInGaAs<sub>N</sub> and AlInGaAsBN.

Claim 31. (New) The method as claimed in claim 25, wherein said layer is selected from the group consisting of boron (B) and alloy thereof.

Claim 32. (New) The method as claimed in claim 31, wherein said metallic nitride layer is selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlIn<sub>N</sub>, InGa<sub>N</sub>, AlBN, InBN, InAs<sub>N</sub>, AlAs<sub>N</sub>, GaAs<sub>N</sub>, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAs<sub>N</sub>, AlGaAs<sub>N</sub>, AlInGaBN, AlInGaAs<sub>N</sub> and AlInGaAsBN.

Claim 33. (New) The method as claimed in claim 25, wherein said layer is selected

from the group consisting of gallium (Ga) and alloy thereof.

Claim 34. (New) The method as claimed in claim 33, wherein said metallic nitride layer is selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlIn<sub>N</sub>, InGa<sub>N</sub>, AlBN, InBN, InAs<sub>N</sub>, AlAs<sub>N</sub>, GaAs<sub>N</sub>, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAs<sub>N</sub>, AlGaAs<sub>N</sub>, AlInGaBN, AlInGaAs<sub>N</sub> and AlInGaAsBN.

Claim 35. (New) The method as claimed in claim 25, wherein said layer is selected from the group consisting of arsenic (As) and alloy thereof.

Claim 36. (New) The method as claimed in claim 35, wherein said metallic nitride layer is selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlIn<sub>N</sub>, InGa<sub>N</sub>, AlBN, InBN, InAs<sub>N</sub>, AlAs<sub>N</sub>, GaAs<sub>N</sub>, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAs<sub>N</sub>, AlGaAs<sub>N</sub>, AlInGaBN, AlInGaAs<sub>N</sub> and AlInGaAsBN.

Claim 37. (New) The method as claimed in claim 25, wherein the method is adapted to a CVD system.

Claim 38. (New) A buffer layer of a light emitting semiconductor device, wherein the light emitting semiconductor device includes a substrate, said buffer layer disposed on the substrate, an light emitting semiconductor layer, and electrodes, said buffer layer is manufactured by the method claimed in claim 11.

Claim 39. (New) A buffer layer of a light emitting semiconductor device, wherein the light emitting semiconductor device includes a substrate, said buffer layer disposed on the

substrate, an light emitting semiconductor layer, and electrodes, said buffer layer is manufactured by the method claimed in claim 25.

Claim 40. (New) A method for manufacturing a buffer layer of a light emitting semiconductor device, comprising the steps of:

providing a substrate;

supplying an organic metal gas;

supplying a nitride gas to react with layers formerly formed by the organic metal gas; and

repeating the steps of supplying the organic metal gas and supplying the nitride gas in sequence so as to form the buffer layer,

thereby the buffer layer is composed of at least one material selected from the group consisting of metals and compound semiconductors.

Claim 41. (New) The method as claimed in claim 40, wherein said substrate is made of material selected from the group of sapphire, SiC, silicon, GaAs, InP, AlN, GaP, GaN, and ZnSe.

Claim 42. (New) The method as claimed in claim 40, wherein the metals are selected from the group consisting of Ga, Al, B, As and In.

Claim 43. (New) The method as claimed in claim 40, wherein the metals are alloys selected from the group consisting of Ga, Al, B, As and In.

Claim 44. (New) The method as claimed in claim 40, wherein the compound semiconductors are selected from the group consisting of GaN, AlN, BN, InN, AlGa<sub>N</sub>, AlInN, InGa<sub>N</sub>, AlBN, InBN, InAsN, AlAsN, GaAsN, AlInGa<sub>N</sub>, AlGaBN, AlInBN, InGaBN, AlInAsN, AlGaAsN, AlInGaBN, AlInGaAsN and AlInGaAsBN.

Claim 45. (New) The method as claimed in claim 40, wherein the method is adapted to a CVD system.